IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

NCR Docket No. **8321**

MMB Docket No. **1001-0590**

Application of: **Addy et al.**   Group Art Unit: **3624**

Serial No. **09/245,592**   Examiner: **S. Wasylchak**

Filed: **February 8, 1999**

Title: **Method and Apparatus for Operating a Configurable Remote Supervisor Terminal of a Self-Service Checkout System**

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner of Patents, Washington, D.C. 20231 on <u>December 2, 2002</u>
(Date of Deposit)

<u>Paul J. Maginot</u>
Name of person mailing Document or Fee

Signature

<u>December 2, 2002</u>
Date of Signature

LETTER

Commissioner for Patents
Washington, D.C. 20231

Sir:

Enclosed are an original and three (3) copies of an Appeal Brief in connection with the above-identified patent application. The Notice of Appeal was filed on October 2, 2002, and thus the Appeal Brief was due two months from this date. Also enclosed herewith is a check for $320.00 to cover the fee required under 37 CFR 1.17(c).

Additionally, the U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency or credit any overpayment, to our Deposit Account No. 13-0014, but not to include any payment of issue fees. If extensions of time under 37 C.F.R. § 1.136 are required to prevent abandonment of the present patent application, then such extensions of time are hereby petitioned for, and any fees therefor are hereby authorized to be charged to our Deposit Account No. 13-0014.

December 2, 2002

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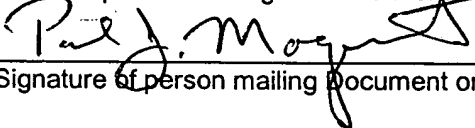
Filed: **February 8, 1999**

For: **Method and Apparatus for Operating a Configurable Remote
       Supervisor Terminal of a Self-Service Checkout System**

BRIEF ON APPEAL

Commissioner of Patents

Washington, D.C. 20231

Sir:

This is an appeal under 37 CFR § 1.191 to the Board of Patent Appeals

and Interferences of the United States Patent and Trademark Office from the

final rejection of the claims 1-17 of the above-identified patent application.

These claims were indicated as finally rejected in an Office Action dated July 5, 2002. Three copies of the brief are filed herewith, together with the $320.00 fee required under 37 CFR § 1.17(c). Also, please provide any extension of time that may be necessary and charge any fees that may be due to Account No. 13-0014, but not to include any payment of issue fees.

(1) REAL PARTY IN INTEREST

NCR Corporation of Dayton, Ohio is the assignee of this patent application, and the real party in interest.

(2) RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences related to this patent application (serial no. 09/245,592).

(3) STATUS OF CLAIMS

Claims 1-17 are pending in the application.

Claims 1-17 are rejected.

Claims 1-17 are being appealed.

Each of claims 1-17 is shown in the Appendix attached to this Appeal Brief.

(4) STATUS OF AMENDMENTS

Appellants have filed no amendments subsequent to the final rejection contained in the Office Action mailed July 5, 2002.

(5) SUMMARY OF INVENTION

The present invention relates generally to a method and apparatus for operating a configurable remote supervisor terminal of a self-service retail checkout system. There is shown in Fig. 1 a self-service retail system 50 for use in a retail business such as a grocery store. The self-service retail system 50 includes a number of self-service checkout terminals 10 (hereinafter referred to individually as self-service checkout terminals 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, and 10i), and a number of remote supervisor terminals 22a, 22b, and 22c. Each of the self-service checkout terminals 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, and 10i is electrically coupled to each of the remote supervisor terminals 22a, 22b, and 22c via a network 25 such as a LAN or WAN. The self-service checkout terminals 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, and 10i communicate with components coupled to the retailer's network 25 such as data servers and the like during a checkout procedure in order to obtain information, such as pricing information, associated with an item being scanned or otherwise entered, and also to verify customer credit approval when appropriate.

Moreover, the remote supervisor terminals 22a, 22b, and 22c communicate with the self-service checkout terminals 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, and 10i via the retailer's network 25 in order to monitor operation

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of the self-service checkout terminals 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, and 10i by the customers operating each of the respective checkout terminals. What is meant herein by the terms "monitor operation" or "monitors operation" is that one of the remote supervisor terminals 22a, 22b, 22c is in communication with the self-service checkout terminal 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, 10i so as to perform supervisory functions that facilitate proper operation of the self-service checkout terminals 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, 10i by the customer. Examples of such supervisory functions include (1) assisting customers in regard to operation of the self-service checkout terminal via an audio/video connection between the checkout terminal and the remote supervisor terminal, (2) providing security to the self-service checkout terminal such as by observing the customers checkout transaction via the video connection, (3) collecting coupons or vouchers from customers, (4) accepting tendered checks from customers, (5) handling credit card verification exceptions, (6) itemizing items that the customer is unable to scan or otherwise enter, and (7) itemizing difficult items such as the identification of exotic produce and the like. As shall be discussed below in more detail, any one of the remote supervisor terminals 22a, 22b, 22c may monitor operation of any number or combination of the self-service checkout terminals 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, 10i thereby enhancing the flexibility of the self-service retail system 50.

Referring now to FIG. 2, there is shown one of the self-service checkout terminals 10 of the retail system 50 that includes a product scale 12, a scanner 14, a bagwell scale 20, a video system 28, a card reader 30, a display monitor

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32, a keypad 34, a printer 36, and a processing unit 26. The card reader 30, the display monitor 32, the keypad 34, and the printer 36 may be provided as separate components, or alternatively may preferably be provided as components of an automated teller machine (ATM) 24.

The self-service checkout terminal 10 also includes a bagwell 38 for accommodating one or more grocery bags (not shown) and a base 40 having a counter 42 secured thereto. The counter 42 defines an arcuate surface as shown in FIG. 2. Such an arcuate surface allows the scanner 14 to be positioned relatively close or otherwise proximate the ATM 24 and hence the components associated therewith. Such a configuration facilitates a user's (e.g. customer's) use of the self-service checkout terminal 10. Moreover, the bagwell 38 is configured to allow two or more grocery bags to be accessed by the customer at any given time thereby allowing a customer to selectively load various item types into the grocery bags. For example, the customer may desire to use a first grocery bag for household chemical items such as soap or bleach, and a second grocery bag for edible items such as meat and produce.

The scanner 14 conventionally scans or reads a product identification code such as a Universal Product Code (UPC), industrial symbol(s), alphanumeric character(s), or other indicia associated with an item to be purchased.

The scanner 14 includes a first scanning window 14a and a second scanning window 14b. The first scanning window 14a is disposed in a substantially horizontal manner, whereas the second scanning window 14b is

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disposed in a substantially vertical manner, as shown in FIG. 2. The product scale 12 is integrated with the scanner 14. More specifically, the product scale 12 is disposed substantially parallel to the scanning window 14a thereby enveloping the scanning window 14a. If an item such as produce is placed upon the product scale 12 or the first scanning window 14a, the product scale 12 may be used to determine the weight of the item.

The scanner 14 also includes a light source (not shown) such as a laser, a rotating mirror (not shown) driven by a motor (not shown), and a mirror array (not shown). In operation, a laser beam reflects off the rotating mirror and mirror array to produce a pattern of scanning light beams. As the product identification code on an item is passed over the scanner 14, the scanning light beams scatter off the code and are returned to the scanner 14 where they are collected and detected. The reflected light is then analyzed electronically in order to determine whether the reflected light contains a valid code pattern. If a valid code pattern is present, the product identification code may then be utilized to retrieve product information associated with the item (e.g. the price of the item).

The display monitor 32 displays instructions that serve to guide a customer through a checkout procedure. For example, an instruction is displayed on the display monitor 32 which instructs the customer to enter an item into the self-service checkout terminal 10 by either passing the item over the scanner 14, or placing the item on the product scale 12 in order to obtain the weight of the item. The display monitor 32 is preferably a known touch screen

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monitor that can generate data signals when certain areas of the screen are touched by a customer.

The bagwell scale 20 is a weight scale which monitors the weight of items placed in the bagwell 38 (i.e. into a grocery bag) or onto the portion of the counter 42 which is located proximate the bagwell 38. It should be appreciated that a customer may place an item onto the portion of the counter 42 proximate the bagwell 38 subsequent to entering the item, but prior to placing the item into a grocery bag. For example, if a customer scans a loaf of bread, the customer may want to place the bread onto the portion of the counter 42 proximate the bagwell 38 until one of the grocery bags is nearly full thereby preventing the bread from being crushed. Hence, the bagwell scale 20 may be utilized to monitor the ingress and egress of items into and out of the bagwell 38 along with onto and off of the counter 42. Such monitoring is particularly useful for preventing items which have not been scanned from being placed into a grocery bag.

The video system 28 includes a video camera 28a, and is included in the self-service checkout terminal 10 to enhance the security thereof. In particular, the video system 28 is provided to capture and transmit video images relating to certain events during a customer's transaction to a display monitor 60 (see FIG. 3) associated with one of the remote supervisor terminals 22a, 22b, 22c. It should be appreciated that the video system 28 may capture and thereafter transmit video images associated with the identification of items such as exotic produce items. Moreover, such video images may track the manner in which a

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customer enters and thereafter handles items for entry. Moreover, such video images may include a video record of the customer himself or herself. Hence, it should be appreciated from the above discussion that the video system 28 may be configured to capture and thereafter transmit any event associated with a customer's operation of one of the self-service checkout terminals 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, and 10i as determined by a particular retailer.

It should be appreciated that the self-service checkout terminals 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, and 10i may also be configured with other communication components so as to facilitate communication between the self-service checkout terminals 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, and 10i and the remote supervisor terminals 22a, 22b, 22c. For example, each of the self-service checkout terminals 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, and 10i may be configured to include a microphone and a speaker assembly for allowing the customer to speak to retail personnel operating the supervisor terminals 22a, 22b, 22c and thereafter hear the response via the speaker assembly.

Referring now to FIG. 3, there is shown an exemplary supervisor terminal that may be utilized as the supervisor terminals 22a, 22b, 22c of the present invention. Each of the supervisor terminals 22a, 22b, 22c includes a keyboard 56, a video camera 58, the display monitor 60, a microphone 62, and a speaker 64. The keyboard 56 is provided to allow retail personnel operating the remote supervisor terminal 22a, 22b, 22c to enter a text message which may be displayed on one of the display monitors 32 associated with a particular self-service checkout terminal 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, and 10i.

Moreover, if the customer operating one of the self-service checkout terminals 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, and 10i does not know the product code associate with a certain item for purchase, retail personnel operating the remote supervisor terminal 22a, 22b, 22c may enter the product code via use of the keyboard 56.

Moreover, the video camera 58 may be utilized to capture and transmit video images of retail personnel operating the remote supervisor terminal 22a, 22b, 22c. Such video images may be displayed on the display monitor 32 of a given self-service checkout terminal 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, and 10i for purposes such as conducting a video conference between the customer and retail personnel operating the remote supervisor terminal 22a, 22b, 22c. The microphone 62 and the speaker 64 are utilized to allow the operator of the remote supervisor terminal 22a, 22b, 22c to carry on a voice conversation with the customer operating the particular self-service checkout terminal 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, and 10i.

As discussed above, each of the remote supervisor terminals 22a, 22b, 22c is configured to monitor operation of any number or combination of the self-service checkout terminals 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, and 10i. For example, as shown in FIG. 4, during periods of relatively light demand (i.e. a relatively small number of customers are present in the retailer's store), a single remote supervisor terminal (e.g. the remote supervisor terminal 22b) may be operated to monitor operation of all of the self-service checkout terminals 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, and 10i. Hence, during such periods of

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relatively light demand, a single store employee may operate one of the remote supervisor terminals (e.g. the remote supervisor terminal 22b) in order to assist customers and provide security to each of the self-service checkout terminals 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, and 10i thereby eliminating the need to staff the remaining remote supervisor terminals (e.g. the remote supervisor terminals 22a, 22c).

However, as demand in the store increases, a second remote supervisor terminal (e.g. the remote supervisor terminal 22c) may "open" as shown in FIG. 5. In such a situation, the self-service retail system 50 is dynamically reconfigured such that the remote supervisor terminal 22b is operated to monitor operation of a first group of the self-service checkout terminals (e.g. the self-service checkout terminals 10a, 10b, 10c, 10d, 10e), whereas the remote supervisor terminal 22c is operated to monitor operation of a second group of the self-service checkout terminals (e.g. the self-service checkout terminals 10f, 10g, 10h, 10i). It should be appreciated that the combination shown in FIG. 5 is exemplary in nature and that any combination and number of the self-service checkout terminals 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, and 10i may be operated by any combination of the remote supervisor terminals 22b and 22c.

If demand in the store continues to increase, a third remote supervisor terminal (e.g. the remote supervisor terminal 22a) may "open" as shown in FIG. 6. In such a situation, the self-service retail system 50 is once again dynamically reconfigured such that the remote supervisor terminal 22a is operated to monitor operation of a first group of the self-service checkout terminals (e.g. the self-

service checkout terminals 10a, 10b, 10c), the remote supervisor terminal 22b is operated to monitor operation of a second group of the self-service checkout terminals (e.g. the self-service checkout terminals 10d, 10e, 10f), and the remote supervisor terminal 22c is operated to monitor operation of a third group of the self-service checkout terminals (e.g. the self-service checkout terminals 10g, 10h, 10i). It should be appreciated that the combination shown in FIG. 6 is exemplary in nature and that any combination and number of the self-service checkout terminals 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, and 10i may be operated by any combination of the remote supervisor terminals 22a, 22b, 22c.

Moreover, as shown in FIG. 7, two or more of the remote supervisor terminals 22a, 22b, 22c (in the case of FIG. 7, terminals 22b and 22c) may be operated to monitor operation of each of the self-service checkout terminals 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, and 10i. In such a configuration, only one of the supervisor terminals 22a, 22b, 22c actually interacts with the customer so as to prevent a duplication of efforts by the store employees operating the remote supervisor terminals 22a, 22b, 22c. For example, in regard to FIG. 7, the store employee staffing the remote supervisor terminal 22c may be a trainee that is not actively involved in the monitoring of operation of the self-service checkout terminals 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, and 10i, but is observing the actions of the employee operating the remote supervisor terminal 22b.

Moreover, in regard to FIG. 7, a queuing sequence may be utilized in which intervention requests are handled by either of the remote supervisor terminals 22b and 22c based on the availability of the terminals. For example, if

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the customer operating the self-service checkout terminal 10c needs assistance

(i.e. intervention), such an intervention request would be routed to the remote

supervisor terminal 22c if the remote supervisor terminal 22b is busy monitoring

operation of another one of the self-service checkout terminals. However, if both

of the remote supervisor terminals 22b and 22c are busy when such an

intervention request is generated by the customer operating the self-service

checkout terminal 10c, the intervention request may be assigned to the remote

supervisor terminal 22b and 22c with the shortest queue.

(6) ISSUES

Whether claims 1-17 are unpatentable under 35 U.S.C. § 103 as being

obvious over Morrison (U.S. Patent No. 6,112,857).

(7) GROUPING OF CLAIMS

Claims 1-17 are argued together for purposes of this appeal only. Thus,

for purposes of this appeal only, claims 1-17 form a single patentable group.

(8) ARGUMENT

Claims 1-17 were rejected under 35 U.S.C. § 103 as being unpatentable over Morrison, namely U.S. Patent No. 6,112,857. The Board of Appeals is respectfully requested to reconsider this rejection of claims 1-17.

Discussion re: Patentability of Claim 1

1. Claim 1

Claim 1 reads as follows:

> 1. A method of operating a retail system which includes (i) a plurality of self-service checkout terminals, (ii) a first remote supervisor terminal, and (iii) a second remote supervisor terminal, comprising the steps of:
> (a) operating said first remote supervisor terminal such that said first remote supervisor terminal monitors operation of each of said plurality of self-service checkout terminals during a first period of time;
> (b) maintaining said second remote supervisor terminal in an idle mode of operation such that said second remote supervisor terminal does not monitor operation of any of said plurality of self-service checkout terminals during said first period of time;
> (c) operating said first remote supervisor terminal such that said first remote supervisor terminal monitors operation of a first group of said plurality of self-service checkout terminals during a second period of time; and
> (d) operating said second remote supervisor terminal such that said second remote supervisor terminal monitors operation of a second group of said plurality of self-service checkout terminals during said second period of time,
> wherein said first group of said plurality of self-service checkout terminals is different from said second group of said plurality of self-service checkout terminals,
> wherein said first remote supervisor terminal is configured to enable a store employee located at said first remote supervisor terminal to communicate with customers respectively located at each of said first group of said plurality of self-service checkout terminals via audio, video, and data connection during step (c), and
> wherein said second remote supervisor terminal is configured to enable a store employee located at said second remote supervisor terminal to communicate with customers respectively located at each of said second group of said plurality of self-service checkout terminals via audio, video, and data connection during step (d).

A self-service checkout terminal is a system that is operated by a customer without the aid of a checkout clerk. In such a system, the customer

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scans individual items for purchase across a scanner and then places the scanned item into a grocery bag, if desired. The customer then pays for his or her purchase either at the self-service checkout terminal if so equipped, or at a central payment area such as a supervisor or payment terminal which is staffed by a store employee. Thus, a self-service checkout terminal permits a customer to select, itemize, and in some cases pay for his or her items for purchase without the assistance of the retailer's personnel.

However, in certain circumstances it is necessary for retail personnel to intervene in order to complete the customer's transaction during operation of the self-service checkout terminal. Such intervention is typically performed by a store employee such as a retail clerk or a customer service manager. Examples of situations which require intervention by the retail clerk or customer service manager include (1) collection of coupons, (2) acceptance of tendered checks, (3) handling of credit card verification exceptions, (4) itemization of items that the customer is unable to scan or otherwise enter, and (5) itemization of difficult items such as the identification of exotic produce and the like.

In order to provide for such intervention, self-service checkout terminals have heretofore been designed to include a summoning device such as a tri-colored signal lamp which is utilized to notify or otherwise summon a retail clerk or customer service manager when it is necessary for a store employee to intervene in the customer's checkout transaction. Thereafter, a store employee approaches the self-service checkout terminal so as to respond to the customer's intervention request. This manner of providing intervention

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undesirably requires the store employee to move from terminal to terminal thereby potentially causing undesirable customer delays if several terminals require intervention within the same general time period.

Another approach that has been taken to providing such intervention is to utilize a store employee operating a remote terminal to provide the necessary intervention into the customer's transaction. In such a configuration, the store employee operating the remote terminal may, for example, approve credit and check payment transactions, enter the product identification code associated with an unscannable item, or identify an exotic produce item via use of a video system. However, use of remote terminals in the manner described above has a number of drawbacks associated therewith. For example, retail checkout systems that have heretofore been designed undesirably dedicate a single remote terminal to a fixed, predetermined number of self-service checkout terminals. For instance, as shown in FIG. 8 of Appellants' patent application, a first remote terminal 110 is dedicated to servicing a first pair of self-service checkout terminals 112, 114, whereas a second remote terminal 210 is dedicated to servicing a second pair of self-service checkout terminals 212, 214. It should be appreciated that in regard to self-service retail checkout systems that have heretofore been designed, the remote terminal 110 could not be utilized to monitor the self-service checkout terminals 212, 214, whereas similarly, the remote monitoring station 210 could not be utilized to monitor the self-service checkout terminals 112, 114. Hence, assuming a given remote terminal is dedicated to a particular pair of self-service checkout terminals, a

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retail checkout system having eight self-service checkout terminals would be required to have four remote terminals. Moreover, if either one of a given pair of self-service checkout terminals (e.g. the self-service checkout terminal 114) is operational, the remote terminal associated therewith (e.g. the remote terminal 110) must be staffed by a store employee even if the other self-service checkout terminal of the pair (e.g. the self-service checkout terminal 112) is not operational thereby potentially increasing labor costs associated with the retailer's operation.

Appellants' invention of claim 1 provides flexibility in regard to the monitoring functions of the self-service checkout terminals by the remote supervisor terminals and thereby overcomes various drawbacks of the prior art.

2. The Morrison Rejection

Firstly, it is alleged in the final Office Action that Morrison discloses the following (presumably at col. 1, L 66 to col. 2 L12; and col. 2, L 20-52; and col. 8, L 39-51; and col. 17, L1-20): "a retail system which includes (i) a plurality of self-service checkout terminals, (ii) a first remote supervisor terminal, and (iii) a second remote supervisor terminal." (See 7/5/02 Office Action at page 2, lines 14-24.) In particular, it appears that Morrison's "assisted checkout terminal" is being equated with the claimed "remote supervisor terminal" (either the first one or the second one). And further that a plurality of such "assisted checkout terminals" is in effect disclosed in Morrison since the "spirit of the invention" paragraph of Morrison (at col. 17, L 1-20) provides some interpretational leeway. However, note that the "assisted checkout terminal" disclosed in Morrison is

vastly different from the claimed "remote supervisor terminal" (either the first one or the second one). For example, the "assisted checkout terminal" referred to in the Morrison reference is not disclosed as being "configured to enable a store employee located at the *assisted checkout terminal* to communicate with customers respectively located at each of the first group of the plurality of self-service checkout terminals via audio, video, and data connection ..." as claimed. Rather, the "assisted checkout terminal" referred to in Morrison is merely "a retail *checkout* terminal operated by a retail clerk employed by the retailer." (See Morrison at col. 2, lines 35-37.) Therefore, since the "assisted checkout terminal" of Morrison does not possess all the claimed characteristics of the "remote supervisor terminal" (either the first one or the second one), the proposed modification of Morrison does not arrive at the invention of claim 1. Thus, a prima facie case of obviousness under 35 U.S.C. § 103 has not been established with respect to the invention of claim 1.

Alternatively, if the Examiner is taking the position that Morrison's "hand-held scanner device 52" is equivalent to the claimed "remote supervisor terminal" (either the first one or the second one), this position is not well founded as well. Indeed, the hand-held scanner device 52 does not *monitor operation* of any other device, much less monitor operation of a group of a plurality of self-service checkout terminals as required in any of claimed steps (a), (c), and (d) of Appellants' claim 1. Accordingly, this proposed modification of Morrison does not arrive at the invention of claim 1. Thus, a prima facie case of obviousness

under 35 U.S.C. § 103 has not been established with respect to the invention of claim 1.

As another alternative, if the Examiner is equating the claimed "remote supervisor terminal" with Morrison's security device 48, this attempt to arrive at the invention of claim 1 is also not well founded. Indeed, the security device 48 merely operates to detect a security event by monitoring weight of an item placed in the bagwell 38 if embodied as a scale, or interruption of a light curtain if embodied as a light curtain device. The security device 48 does not monitor operation of a group of a plurality of self-service checkout terminals as required in any of steps (a), (c), and (d) of Appellants' claim 1.

Moreover, it appears that the final Office Action contains allegations that Morrison discloses the following limitations at col. 9, L10-35; col. 9, L45 to col. 10, L 4; col. 16, L 37-67; and col. 17, L1-13: "operating said first remote supervisor terminal such that said first remote supervisor terminal monitors operation of each of said plurality of self-service checkout terminals." (See 7/5/02 Office Action at page 3, lines 1-4.) However, nowhere in the above-identified passages of Morrison is there any teaching of the hand-held scanner device 52 (equated with a claimed remote supervisor terminal), or any other device, monitoring operation *of each of said plurality of self-service checkout terminals* as required by Appellants' claim 1. Accordingly, the proposed modification of Morrison further does not arrive at the invention of claim 1. Thus, a prima facie case of obviousness under 35 U.S.C. § 103 has further not been established with respect to the invention of claim 1.

3. Conclusion

As a result, a prima facie case of obviousness under 35 U.S.C. § 103 has

not been established with regard to Appellants' invention defined by claim 1, and

the Board of Appeals is respectfully requested to reverse the rejection of claim 1.

Discussion Re: Patentability of Claims 2-6

Each of claims 2-6 depends directly from claim 1. As a result, each of

claims 2-6 is allowable for at least the reasons hereinbefore discussed with

regard to claim 1.

Discussion re: Patentability of Claim 7

Claim 7 reads as follows:

> 7. A method of operating a retail system, comprising the steps of:
> (a) operating a first remote supervisor terminal so as to monitor operation of a first group of self-service checkout terminals during a first period of time;
> (b) operating a second remote supervisor terminal so as to monitor operation of a second group of self-service checkout terminals during said first period of time;
> (c) operating said first remote supervisor terminal so as to monitor operation of said second group of self-service checkout terminals during a second period of time; and
> (d) operating said second remote supervisor terminal so as to monitor operation of said first group of self-service checkout terminals during said second period of time,
> wherein said first group of self-service checkout terminals is different from said second group of self-service checkout terminals,
> wherein said first remote supervisor terminal is configured to enable a store employee located at said first remote supervisor terminal to communicate with customers respectively located at each of said first group of self-service checkout terminals via audio, video, and data connection during step (a),
> wherein said second remote supervisor terminal is configured to enable a store employee located at said second remote supervisor terminal to communicate with customers respectively located at each of said second group of self-service checkout terminals via audio, video, and data connection during step (b),
> wherein said first remote supervisor terminal is configured to enable a store employee located at said first remote supervisor terminal to communicate

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with customers respectively located at each of said second group of self-service checkout terminals via audio, video, and data connection during step (c)

wherein said second remote supervisor terminal is configured to enable a store employee located at said second remote supervisor terminal to communicate with customers respectively located at each of said first group of self-service checkout terminals via audio, video, and data connection during step (d).

The discussion in regard to the patentability of claim 1 is relevant to the patentability of claim 7. Consequently, Appellants' invention of claim 7 is not unpatentable over a modification of Morrison.

Discussion Re: Patentability of Claims 8-12

Each of claims 8-12 depends directly or indirectly from claim 7. As a result, each of claims 8-12 is allowable for at least the reasons hereinbefore discussed with regard to claim 7.

Discussion re: Patentability of Claim 13

Claim 13 reads as follows:

> 13. A self-service retail system, comprising:
> a plurality of self-service checkout terminals for allowing a plurality of customers to checkout items for purchase;
> a first remote supervisor terminal electrically coupled via audio, video and data connection to each of said plurality of self-service checkout terminals so as to enable a store employee located at said first remote supervisor terminal to communicate with customers respectively located at each of said plurality of self-service checkout terminals via said audio, video, and data connection; and
> a second remote supervisor terminal electrically coupled via audio, video and data connection to each of said plurality of self-service checkout terminals so as to enable a store employee located at said second remote supervisor terminal to communicate with customers respectively located at each of said plurality of self-service checkout terminals via said audio, video, and data connection,
> wherein (i) said first remote supervisor terminal is configured to monitor operation of each of said plurality of self-service checkout terminals during a first period of time, (ii) said second remote supervisor terminal is maintained in an idle mode of operation during said first period of time, (iii) said first remote supervisor terminal is further configured to monitor operation of a first group of said plurality of self-service checkout terminals during a second period of time, (iv) said second remote supervisor terminal is further configured to monitor operation a second

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group of said plurality of self-service checkout terminals during said second period of time, and (v) said first group of said plurality of self-service checkout terminals is different from said second group of said plurality of self-service checkout terminals.

The discussion in regard to the patentability of claim 1 is relevant to the patentability of claim 13. Appellants' invention of claim 13 is therefore not unpatentable over a modification of Morrison.
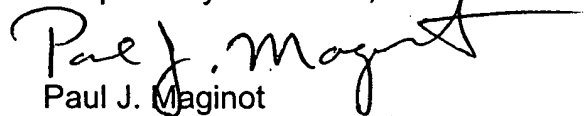
Discussion Re: Patentability of Claims 14-17

Each of claims 14-17 depends directly from claim 13. As a result, each of ·claims 14-17 is allowable for at least the reasons hereinbefore discussed with regard to claim 13.

(9) CONCLUSION

Claims 1-17 are not unpatentable under 35 U.S.C. § 103 as being obvious over Morrison (U.S. Patent No. 6,112,857), and the Board of Appeals is respectfully requested to reverse the rejection of these claims.

Respectfully submitted,

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(10) APPENDIX

1. A method of operating a retail system which includes (i) a plurality of self-service checkout terminals, (ii) a first remote supervisor terminal, and (iii) a second remote supervisor terminal, comprising the steps of:

(a) operating said first remote supervisor terminal such that said first remote supervisor terminal monitors operation of each of said plurality of self-service checkout terminals during a first period of time;

(b) maintaining said second remote supervisor terminal in an idle mode of operation such that said second remote supervisor terminal does not monitor operation of any of said plurality of self-service checkout terminals during said first period of time;

(c) operating said first remote supervisor terminal such that said first remote supervisor terminal monitors operation of a first group of said plurality of self-service checkout terminals during a second period of time; and

(d) operating said second remote supervisor terminal such that said second remote supervisor terminal monitors operation of a second group of said plurality of self-service checkout terminals during said second period of time,

wherein said first group of said plurality of self-service checkout terminals is different from said second group of said plurality of self-service checkout terminals,

wherein said first remote supervisor terminal is configured to enable a store employee located at said first remote supervisor terminal to communicate with customers respectively located at each of said first group of said plurality of self-service checkout terminals via audio, video, and data connection during step (c), and

wherein said second remote supervisor terminal is configured to enable a store employee located at said second remote supervisor terminal to communicate with customers respectively located at each of said second group of said plurality of self-service checkout terminals via audio, video, and data connection during step (d).

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2. The method of claim 1, wherein said step of operating said first remote supervisor terminal such that said first remote supervisor terminal monitors operation of each of said plurality of self-service checkout terminals includes the step of operating said first remote supervisor terminal such that said first remote supervisor terminal monitors operation of each of said plurality of self-service checkout terminals so as to assist a plurality of customers respectively operating each of said plurality of self-service checkout terminals.

3. The method of claim 1, wherein:

said step of operating said first remote supervisor terminal such that said first remote supervisor terminal monitors operation of said first group of said plurality of self-service checkout terminals includes the step of operating said first remote supervisor terminal such that said first remote supervisor terminal monitors operation of said first group of said plurality of self-service checkout terminals so as to assist a first group of customers respectively operating each of said first group of self-service checkout terminals, and

said step of operating said second remote supervisor terminal such that said second remote supervisor terminal monitors operation of said second group of said plurality of self-service checkout terminals includes the step of operating said second remote supervisor terminal such that said second remote supervisor terminal monitors operation of said second group of said plurality of self-service checkout terminals so as to assist a second group of customers respectively operating each of said second group of self-service checkout terminals.

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4. The method of claim 1, wherein said step of operating said first remote supervisor terminal such that said first remote supervisor terminal monitors operation of each of said plurality of self-service checkout terminals includes the step of operating said first remote supervisor terminal so as to provide security to each of said plurality of self-service checkout terminals during said first period of time.

5. The method of claim 1, wherein:

said step of operating said first remote supervisor terminal such that said first remote supervisor terminal monitors operation of said first group of said plurality of self-service checkout terminals includes the step of operating said first remote supervisor terminal so as to provide security to said first group of said plurality of self-service checkout terminals during said second period of time, and

said step of operating said second remote supervisor terminal such that said second remote supervisor terminal monitors operation of said second group of said plurality of self-service checkout terminals includes the step of operating said second remote supervisor terminal so as to provide security to said second group of said plurality of self-service checkout terminals during said second period of time.

6. The method of claim 1, wherein said retail system further includes a third remote supervisor terminal, further comprising the steps of:

operating said first remote supervisor terminal such that said first remote supervisor terminal monitors operation of a third group of said plurality of self-service checkout terminals during a third period of time;

operating said second remote supervisor terminal such that said second remote supervisor terminal monitors operation of a fourth group of said plurality of self-service checkout terminals during said third period of time; and

operating a third remote supervisor terminal such that said third remote supervisor terminal monitors operation of a fifth group of said plurality of self-service checkout terminals during said third period of time,

wherein each of said first group of self-service checkout terminals, said second group of self-service checkout terminals, said third group of self-service checkout terminals, said fourth group of self-service checkout terminals, and said fifth group of self-service checkout terminals is different from one another.

7. A method of operating a retail system, comprising the steps of:

(a) operating a first remote supervisor terminal so as to monitor operation of a first group of self-service checkout terminals during a first period of time;

(b) operating a second remote supervisor terminal so as to monitor operation of a second group of self-service checkout terminals during said first period of time;

(c) operating said first remote supervisor terminal so as to monitor operation of said second group of self-service checkout terminals during a second period of time; and

(d) operating said second remote supervisor terminal so as to monitor operation of said first group of self-service checkout terminals during said second period of time,

wherein said first group of self-service checkout terminals is different from said second group of self-service checkout terminals,

wherein said first remote supervisor terminal is configured to enable a store employee located at said first remote supervisor terminal to communicate with customers respectively located at each of said first group of self-service checkout terminals via audio, video, and data connection during step (a),

wherein said second remote supervisor terminal is configured to enable a store employee located at said second remote supervisor terminal to communicate with customers respectively located at each of said second group of self-service checkout terminals via audio, video, and data connection during step (b),

wherein said first remote supervisor terminal is configured to enable a store employee located at said first remote supervisor terminal to communicate with customers respectively located at each of said second group of self-service checkout terminals via audio, video, and data connection during step (c)

wherein said second remote supervisor terminal is configured to enable a store employee located at said second remote supervisor terminal to communicate with customers respectively located at each of said first group of self-service checkout terminals via audio, video, and data connection during step (d).

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8. The method of claim 7, wherein:

said step of operating said first supervisor terminal so as to monitor operation of said first group of self-service checkout terminals includes the step of operating said first supervisor terminal so as to assist a first group of customers respectively operating said first group of self-service checkout terminals during said first period of time, and

said step of operating said second supervisor terminal so as to monitor operation of said second group of self-service checkout terminals includes the step of operating said second supervisor terminal so as to assist a second group of customers respectively operating said second group of self-service checkout terminals during said first period of time.

9. The method of claim 8, wherein:

said step of operating said first supervisor terminal so as to monitor operation of said second group of self-service checkout terminals includes the step of operating said first supervisor terminal so as to assist a third group of customers respectively operating said second group of self-service checkout terminals during said second period of time, and

: said step of operating said second supervisor terminal so as to monitor operation of said first group of self-service checkout terminals includes the step of operating said second supervisor terminal so as to assist a fourth group of customers respectively operating said first group of self-service checkout terminals during said second period of time.

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10. The method of claim 7, wherein:

said step of operating said first supervisor terminal so as to monitor operation of said first group of self-service checkout terminals includes the step of operating said first supervisor terminal so as to provide security to said first group of self-service checkout terminals during said first period of time, and

said step of operating said second supervisor terminal so as to monitor operation of said second group of self-service checkout terminals includes the step of operating said second supervisor terminal so as to provide security to said second group of self-service checkout terminals during said first period of time.

11. The method of claim 10, wherein:

said step of operating said first supervisor terminal so as to monitor operation of said second group of self-service checkout terminals includes the step of operating said first supervisor terminal so as to provide security to said second group of self-service checkout terminals during said second period of time, and

said step of operating said second supervisor terminal so as to monitor operation of said first group of self-service checkout terminals includes the step of operating said second supervisor terminal so as to provide security to said first group of self-service checkout terminals during said second period of time.

12. The method of claim 7, further comprising the step of operating a third remote supervisor terminal so as to monitor operation of both said first group of self-service checkout terminals and said second group of self-service checkout terminals during a third period of time.

13. A self-service retail system, comprising:

a plurality of self-service checkout terminals for allowing a plurality of customers to checkout items for purchase;

a first remote supervisor terminal electrically coupled via audio, video and data connection to each of said plurality of self-service checkout terminals so as to enable a store employee located at said first remote supervisor terminal to communicate with customers respectively located at each of said plurality of self-service checkout terminals via said audio, video, and data connection; and

a second remote supervisor terminal electrically coupled via audio, video and data connection to each of said plurality of self-service checkout terminals so as to enable a store employee located at said second remote supervisor terminal to communicate with customers respectively located at each of said plurality of self-service checkout terminals via said audio, video, and data connection,

wherein (i) said first remote supervisor terminal is configured to monitor operation of each of said plurality of self-service checkout terminals during a first period of time, (ii) said second remote supervisor terminal is maintained in an idle mode of operation during said first period of time, (iii) said first remote supervisor terminal is further configured to monitor operation of a first group of said plurality of self-service checkout terminals during a second period of time, (iv) said second remote supervisor terminal is further configured to monitor operation a second group of said plurality of self-service checkout terminals during said second period of time, and (v) said first group of said plurality of self-service checkout terminals is different from said second group of said plurality of self-service checkout terminals.

14. The self-service retail system of claim 13, wherein said first remote supervisor terminal is further configured to assist each of said plurality of customers during said first period of time.

15. The self-service retail system of claim 13, wherein:

said first remote supervisor terminal is further configured to assist a first group of said plurality of customers during said second period of time, and

said second remote supervisor terminal is further configured to assist a second group of said plurality of customers during said second period of time.

16. The self-service retail system of claim 13, wherein said first remote supervisor terminal is further configured to provide security to each of said plurality of self-service checkout terminals during said first period of time.

17. The self-service retail system of claim 13, wherein:

said first remote supervisor terminal is further configured to provide security to said first group of said plurality of self-service checkout terminals during said second period of time, and

said second remote supervisor terminal is further configured to provide security to said second group of said plurality of self-service checkout terminals during said second period of time.